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GERARDUS C.P. LOKHOFF
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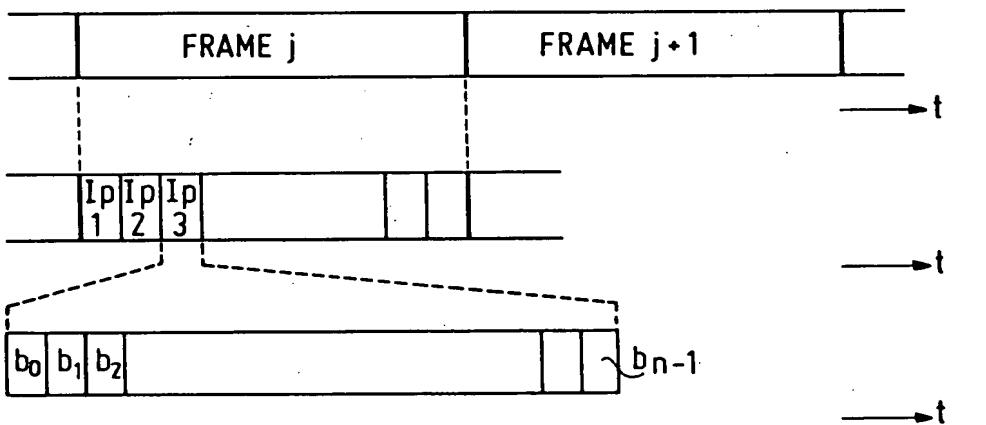


FIG.1

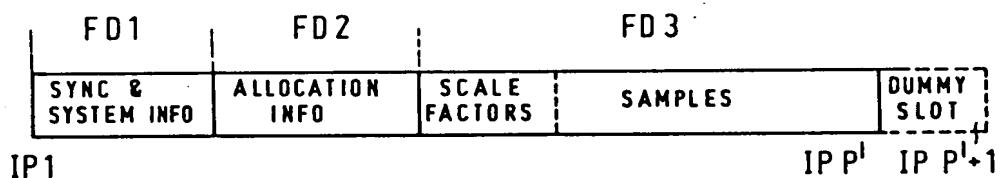


FIG.2

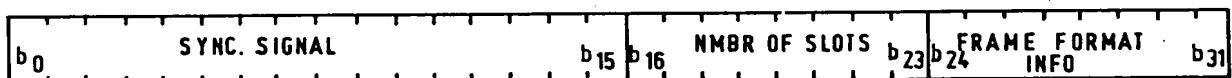


FIG.3

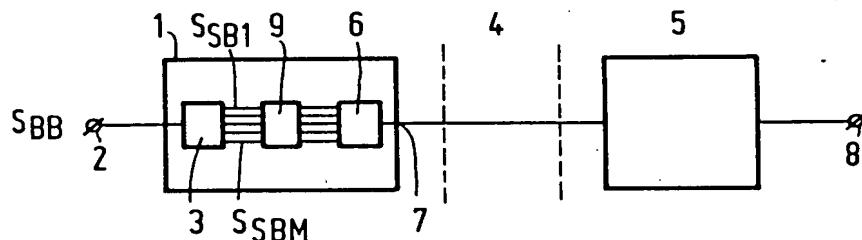


FIG.4

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BR bitrate (kbits/s)	Fs sample freq. (kHz)	B # slots in a frame
128	32	48
	44.1	34 + padding
	48	32
192	32	72
	44.1	52 + padding
	48	48
256	32	96
	44.1	69 + padding
	48	64
384	32	144
	44.1	104 + padding
	48	96

FIG. 5

bitrate (kbits/s)	total # frames in padding sequence	# frames with a dummy slot
128	147	122
192	49	12
256	147	97
384	49	24

FIG. 6

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Bit 24 :	Frame type	0	format A
		1	format B
Bits 25 and 26: Copyright		0 0	no copyright, own rec.
		0 1	no copyright, software
		1 0	copyright, own recording
		1 1	copyright, software
Bits 27 - 31 : Mode indication			
		Sample Freq.	Emphasis
0 0 0 0 0	Stereo	48 kHz	no emphasis
0 0 0 0 1	Stereo	48 kHz	50/15 μ sec
0 0 0 1 0	Stereo	44.1 kHz	no emphasis
0 0 0 1 1	Stereo	44.1 kHz	50/15 μ sec
0 0 1 0 0	Stereo	32 kHz	no emphasis
0 0 1 0 1	Stereo	32 kHz	50/15 μ sec
0 0 1 1 0		reserved	
0 0 1 1 1		reserved	
0 1 0 0 0	2 Chan.	48 kHz	no emphasis
0 1 0 0 1	2 Chan.	48 kHz	50/15 μ sec
0 1 0 1 0	2 Chan.	44.1 kHz	no emphasis
0 1 0 1 1	2 Chan.	44.1 kHz	50/15 μ sec
0 1 1 0 0	2 Chan.	32 kHz	no emphasis
0 1 1 0 1	2 Chan.	32 kHz	50/15 μ sec
0 1 1 1 0		reserved	
0 1 1 1 1		reserved	
1 0 0 0 0	1 Chan.	48 kHz	no emphasis
1 0 0 0 1	1 Chan.	48 kHz	50/15 μ sec
1 0 0 1 0	1 Chan.	44.1 kHz	no emphasis
1 0 0 1 1	1 Chan.	44.1 kHz	50/15 μ sec
1 0 1 0 0	1 Chan.	32 kHz	no emphasis
1 0 1 0 1	1 Chan.	32 kHz	50/15 μ sec
1 0 1 1 0		reserved	
1 0 1 1 1	1 Chan.	48 kHz	CCITT J.17
1 1 0 0 0	Stereo	48 kHz	CCITT J.17
1 1 0 0 1	2 Chan.	48 kHz	CCITT J.17
1 1 0 1 0	Stereo	44.1 kHz	CCITT J.17
1 1 0 1 1	2 Chan.	44.1 kHz	CCITT J.17
1 1 1 0 0	Stereo	32 kHz	CCITT J.17
1 1 1 0 1	2 Chan.	32 kHz	CCITT J.17
1 1 1 1 0	1 Chan.	32 kHz	CCITT J.17
1 1 1 1 1	1 Chan.	44.1 kHz	CCITT J.17

FIG. 7

mode	channel I	channel II
stereo	left	right
2 channel mono	program I	program II
1 channel mono	program I	not used

FIG. 8

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allocation info	length of samples in bits	
0000	-	(no samples or scale factors transferred)
0001	2	
0010	3	
0011	4	
0100	5	
0101	6	
0110	7	
0111	8	
1000	9	
1001	10	
1010	11	
1011	12	
1100	13	
1101	14	
1110	15	
1111		not used to prevent incorrect sync detection

FIG.9

slot 2:	I-1	II-1	I-2	II-2	I-3	II-3	I-4	II-4
slot 3:	I-5	II-5	I-6	II-6	I-7	II-7	I-8	II-8
slot 4:	I-9	II-9	I-10	II-10	I-11	II-11	I-12	II-12
slot 5:	I-13	II-13	I-14	II-14	I-15	II-15	I-16	II-16
slot 6:	I-17	II-17	I-18	II-18	I-19	II-19	I-20	II-20
slot 7:	I-21	II-21	I-22	II-22	I-23	II-23	I-24	II-24
slot 8:	I-25	II-25	I-26	II-26	I-27	II-27	I-28	II-28
slot 9:	I-29	II-29	I-30	II-30	I-31	II-31	I-32	II-32

FIG.10

slot 2:	I-1	II-1	I-2	II-2	I-3	II-3	I-4	II-4
slot 3:	I-5	II-5	I-6	II-6	I-7	II-7	I-8	II-8
slot 4:	I-9	II-9	I-10	II-10	I-11	II-11	I-12	II-12
slot 5:	I-13	II-13	I-14	II-14	I-15	II-15	I-16	II-16

FIG.11

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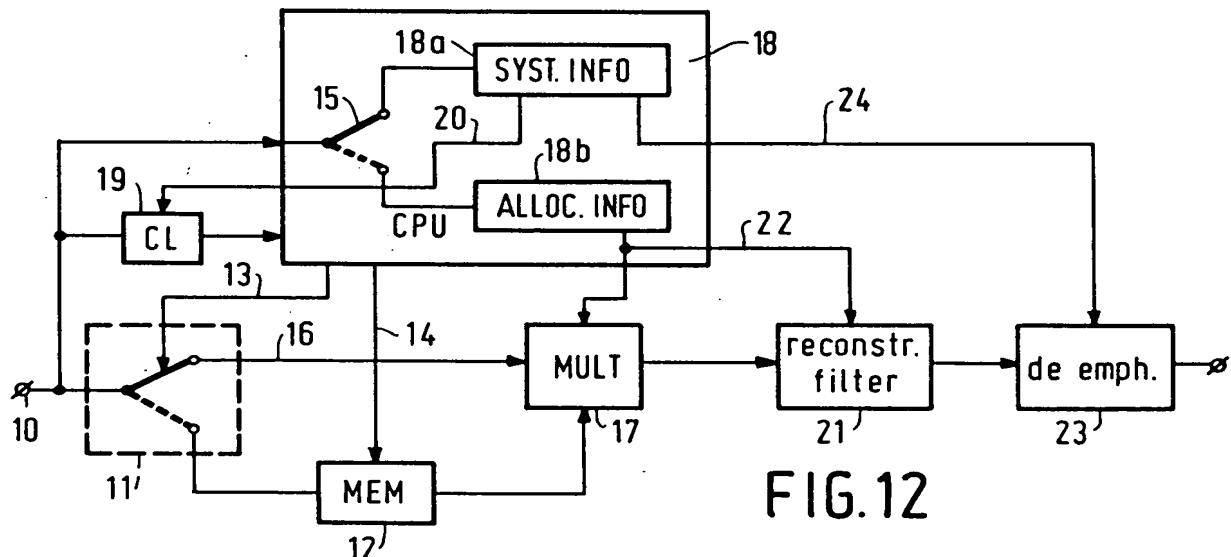


FIG.12

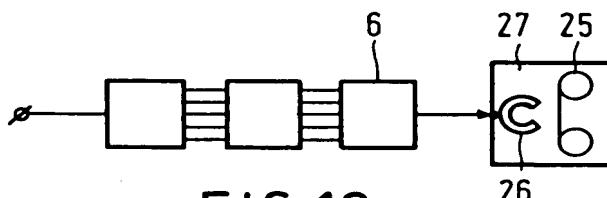


FIG.13

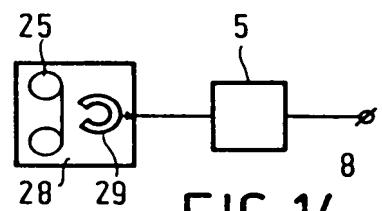
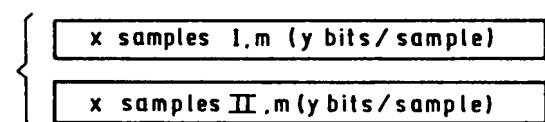
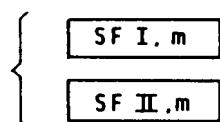
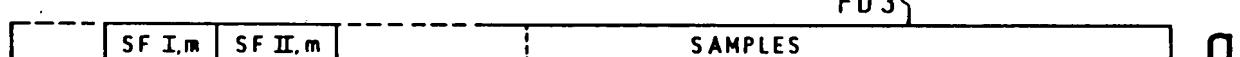


FIG.14

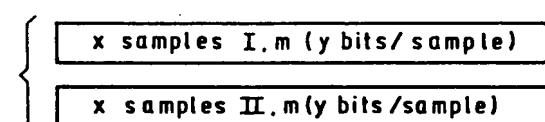
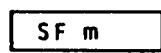


a

b



c



d

FIG.15

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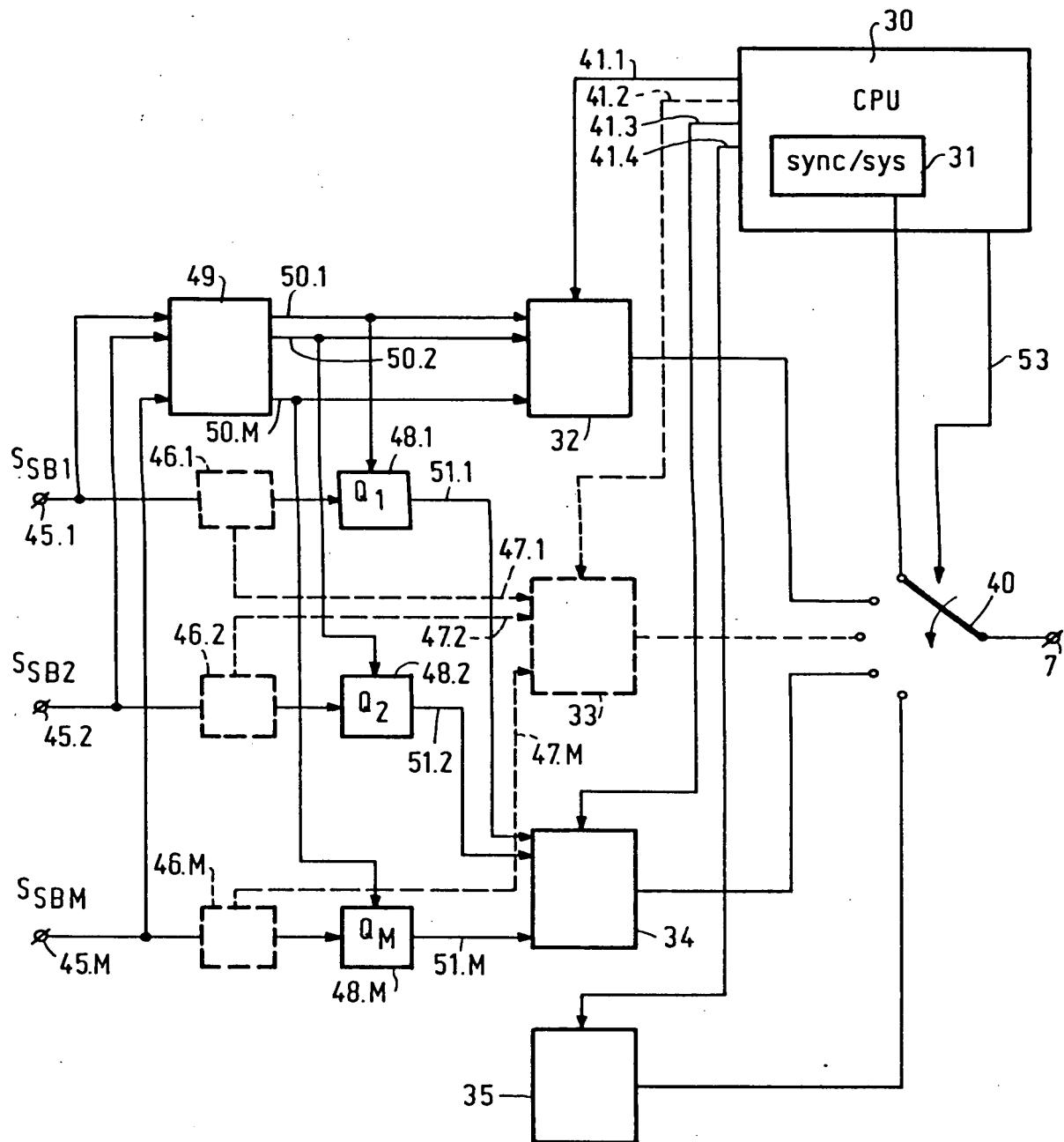


FIG. 16

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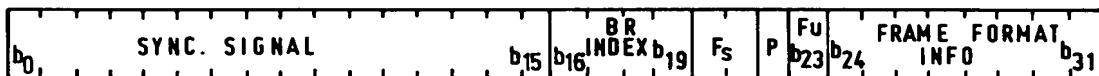


FIG.17

Bits 16 to 19 : bitrate index

bitrate (kbits/ sec.)	index	sample frequency		32 kHz # slots
		48 kHz # slots	44.1 kHz # slots	
32	1	8	8	12
64	2	16	17	24
96	3	24	26	36
128	4	32	34	48
160	5	40	43	60
192	6	48	52	72
224	7	56	60	84
256	8	64	69	96
288	9	72	78	108
320	10	80	87	120
352	11	88	95	132
384	12	96	104	144
416	13	104	113	156
448	14	112	121	168

+ padding

Bits 20 and 21 : Sample Frequency

0 0	44.1 kHz
0 1	48 kHz
1 0	32 kHz
1 1	reserved

Bit 22 : padding bit

'1' if the frame contains a 'dummy' slot, Otherwise '0'

Bit 23 : Future Use

reserved for future use,
'0' for the time being.

FIG.18

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FIG.19

Bits 24 and 25 : Mode indication

0 0	stereo
0 1	intensity stereo
1 0	bilingual
1 1	mono

Bits 26 and 27 : Intensity stereo mode switches :

0 0	subbands 5 - 32	in intensity stereo mode
0 1	subbands 9 - 32	in intensity stereo mode
1 0	subbands 13 - 32	in intensity stereo mode
1 1	subbands 17 - 32	in intensity stereo mode

Bit 28 : Copyright 0 no copyright
1 copyright protected

Bit 29 : Original/Home Copy 0 Copy
1 Original

Bits 30 and 31 : Emphasis 0 0 no emphasis
0 1 50/15 μ sec emphasis
1 0 reserved
1 1 CCITT J.17

FIG.20

Mono mode :

M = mono signal

slot 2:	M-1	M-2	M-3	M-4	M-5	M-6	M-7	M-8
slot 3:	M-9	M-10	M-11	M-12	M-13	M-14	M-15	M-16
slot 4:	M-17	M-18	M-19	M-20	M-21	M-22	M-23	M-24
slot 5:	M-25	M-26	M-27	M-28	M-29	M-30	M-31	M-32

FIG.21

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Intensity Stereo mode :

L = left channel, R = right channel, M = mono signal

Switch bits (bits 26 and 27) are 0 0 :

slot 2:

L-1	R-1	L-2	R-2	L-3	R-3	L-4	R-4	
slot 3:	M-5	M-6	M-7	M-8	M-9	M-10	M-11	M-12
slot 4:	M-13	M-14	M-15	M-16	M-17	M-18	M-19	M-20
slot 5:	M-21	M-22	M-23	M-24	M-25	M-26	M-27	M-28
slot 6:	M-29	M-30	M-31	M-32				

FIG. 22a

Switch bits are 0 1 :

slot 2:

L-1	R-1	L-2	R-2	L-3	R-3	L-4	R-4	
slot 3:	L-5	R-5	L-6	R-6	L-7	R-7	L-8	R-8
slot 4:	M-9	M-10	M-11	M-12	M-13	M-14	M-15	M-16
slot 5:	M-17	M-18	M-19	M-20	M-21	M-22	M-23	M-24
slot 6:	M-25	M-26	M-27	M-28	M-29	M-30	M-31	M-32

FIG. 22b

Switch bits are 1 0 :

slot 2:

L-1	R-1	L-2	R-2	L-3	R-3	L-4	R-4	
slot 3:	L-5	R-5	L-6	R-6	L-7	R-7	L-8	R-8
slot 4:	L-9	R-9	L-10	R-10	L-11	R-11	L-12	R-12
slot 5:	M-13	M-14	M-15	M-16	M-17	M-18	M-19	M-20
slot 6:	M-21	M-22	M-23	M-24	M-25	M-26	M-27	M-28
slot 7:	M-29	M-30	M-31	M-32				

FIG. 22c

Switch bits are 1 1 :

slot 2:

L-1	R-1	L-2	R-2	L-3	R-3	L-4	R-4	
slot 3:	L-5	R-5	L-6	R-6	L-7	R-7	L-8	R-8
slot 4:	L-9	R-9	L-10	R-10	L-11	R-11	L-12	R-12
slot 5:	L-13	R-13	L-14	R-14	L-15	R-15	L-16	R-16
slot 6:	M-17	M-18	M-19	M-20	M-21	M-22	M-23	M-24
slot 7:	M-25	M-26	M-27	M-28	M-29	M-30	M-31	M-32

FIG. 22d

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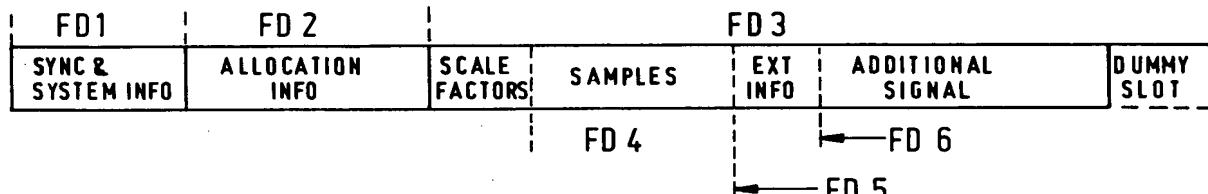


FIG. 23

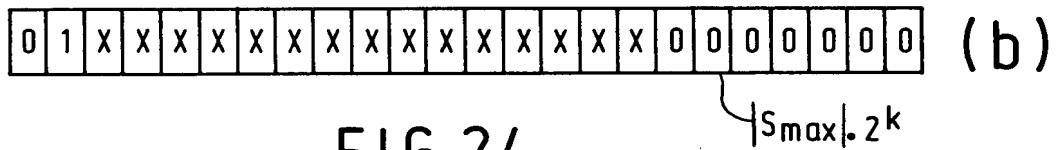
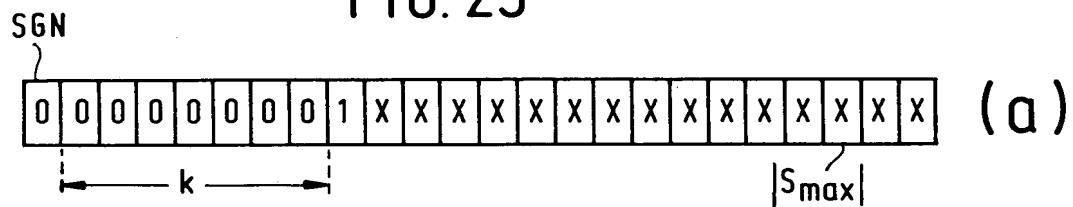


FIG. 24

s'	s''	truncated	
0 + 1	0.75	011	110
0.71	0.50	010	101
0.42	0.25	001	100
0.14	0	000	011
- 0.14	- 0.25	111	010
- 0.42	- 0.50	110	001
- 0.71	- 0.75	101	000
- 1	- 1	100	

FIG. 25

s''	s'''	s''''	s'''''	
0.50	0.857	0.571	+ 1	
0.25	0.571	0.287	0.71	
0.00	0.287	0.00	0.42	
- 0.25	0.00	- 0.287	0.14	
- 0.50	- 0.287	- 0.571	- 0.14	
- 0.75	- 0.571	- 0.857	- 0.42	
- 1.00	- 0.857	- 1.00	- 0.71	

FIG. 26